



RECEIVED *GP 1627*
APR 26 2001 PATENT *#4*
TECH CENTER 1600/2900 100390-9922

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Sun et al.
Serial No. : 09/742,033
Filed : December 20, 2000
For : **COREACTANT INCLUDING
ELECTROCHEMILUMINESCENT COMPOUNDS,
METHODS, SYSTEMS AND KITS UTILIZING SAME**
Group Art Unit : 1627
Examiner : Wessendorf, T.

919 Third Avenue
New York, New York 10128

CERTIFICATE OF FIRST CLASS MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on

Date: 4/20/01

Signature: *Phyllis Hirshorn*

Phyllis Hirshorn

Kramer Levin Naftalis & Frankel LLP

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir/Madam:

Applicants take this opportunity to bring to the attention of the Examiner the following listed documents:

1. U.S. Patent No. 5,786,141 issued July 28, 1998 by Bard, et al.
2. U.S. Serial No. 08/467,712 filed June 6, 1995 by Martin.

3. Dong et al., "Enzyme-Triggered Formation of Electrochemiluminescent Ruthenium Complexes", Analytical Biochemistry 236, 344-347 (1996).
4. United States Patent No. 5,147,806, issued September 15, 1992 to Kamin, et al.
5. United States Patent No. 5,068,808, issued November 26, 1991 to Hall, et al.
6. United States Patent No. 5,061,445, issued October 29, 1991 to Brose, et al.
7. United States Patent No. 5,296,191, issued March 22, 1994 to Hall, et al.
8. United States Patent No. 5,247,243, issued September 21, 1993 to Hall, et al.
9. United States Patent No. 5,221,605, issued June 22, 1993 to Bard et al.
10. United States Patent No. 5,238,808, issued August 24, 1993 to Bard, et al.
11. United States Patent No. 5,310,687, issued May 10, 1994 to Bard, et al.
12. United States Patent No. 5,264,346, issued November 23, 1993 to Chen.
13. United States Patent No. 4,470,459, issued September 11, 1995 to Copeland
14. United States Patent No. 5,093,268 issued March 3, 1992 to Leventis et al.
15. United States Patent No. 5,250,415 issued October 5, 1993 to Ebeling et al.
16. United States Patent No. 5,324,835 issued June 28, 1994 to Yamaguchi
17. United States Patent No. 5,229,202 issued July 20, 1993 to Tomono et al.
18. United States Patent No. 5,384,028 issued January 24, 1995 to Ito et al.
19. United States Patent No. 5,264,092 issued November 23, 1993 to Skotheim et al.
20. United States Patent No. 5,340,722 issued August 23, 1994 to Wolfbeis et al.
21. United States Patent No. 5,235,808 issued August 17, 1993 to Taylor
22. United States Patent No. 4,238,195 issued December 9, 1980 to Boguskalski et al.
23. United States Patent No. 4,372,745 issued February 8, 1983 to Mandle et al.

24. United States Patent No. 4,396,579 issued August 2, 1983 to Schroeder et al.
25. United States Patent No. 4,647,532 issued March 3, 1987 to Watanabe et al.
26. United States Patent No. 4,994,377 issued February 19, 1991 to Nakamura et al.
27. United States Patent No. 5,093,238 issued March 3, 1992 to Yamashoji et al.
28. United States Patent No. 5,238,610 issued August 24, 1993 to Thompson
29. Vilim and Wilhelm "What Do We Measure by a Luminol-Dependent Chemiluminescence of Phagocytes?" 6, Free Radical Biology & Medicine, 623-629 (1989).
30. Allain, C.C. et al. "Enzymatic Determination of Total Serum Cholesterol", 20, Clinical Chemistry, 470-475 (1974).
31. Rubenstein and Bard, "Electrogenerated Chemiluminescence," 37, (1981)
32. European Patent No. WO 84/03303, issued August 30, 1984 to Carr et al.
33. Yang et al., "Electrochemiluminescence: A New Diagnostic and Research Tool:", 12 Bio/Technology, 1930194 (2/94)
34. Massey, Biomedical Products, October 1992
35. Blackburn et al., "Electrochemiluminescence Detection for Development of Immunoassays and DNA Probe Assays for Clinical Diagnostics", Vol. No. 9 Clin. Chem., 1534-1539 (1991)
36. D.J. Payne, "Metallo- β -lactamases-a new therapeutic challenge", 39 J. Med. Microbiol., 93-99 (1993).
37. S. Coulton and I. Francois, "6 β -Lactamases: Targets for Drug Design", 31 Progress in Medicinal Chemistry, 297-349 (1994);

38. Moellering, R.C., Jr., 31 J. Antimicrob. Chemother., (Suppl. A) 1-8 (1993).
39. Harold C. Neu, "The Crisis in Antibiotic Resistance", 257 Science, 1064-1072 (8/21/92)
40. A.C. Peterson et al., "Evaluation of four qualitative methods for detection of β -lactamases production of Staphylococcus and Micrococcus species", Vol. 8, No. 11 Cur. J. Clin. Microbiol. Infect. Dis., 962-967 (1989)
41. Yolken et al., "Rapid diagnosis of infections caused by β -lactamase-producing bacteria by means of an enzyme radioisotopic assay", Vol. 97, No. 5 The Journal of Pediatrics, 715-720 (11/80)
42. S.C. Anderson and S. Cocayne, Clinical Chemistry: Concepts and Applications, W.B. Saunders, Philadelphia, PA (1993)
43. Yolken et al., 73 J. Immunol. Meth., 109-123 (1984)
44. Svensson et al., "Synthesis and Characterization of Monoclonal Antibody β -Lactamase Conjugates", 5 Bioconjugate Chem., 262-267 (1994)
45. Leland and Powell "Electrogenerated Chemiluminescence: An Oxidative-Reduction Type ECL Reaction Sequence Using Tripropyl Amine," 137, Journal of the Electrochemical Society, 3127-3129 (1990)
46. Persson et al. "Continuous Regeneration of NAD(H) Covalently Bound to a Cysteine Genetically Engineered Into Glucose Dehydrogenase," 9, Bio/Technology, 280-284 (1991).
47. Mansson and Mosbach, 136, Methods in Enzymology, 3-34 (1987)

48. Yomo et al. "Preparation and Kinetic Properties of 5-Ethylpehazine-glucose-dehydrogenase-NAD⁺Conjugate, Semisynthetic Glucose Oxidase," 200, Journal of Biochem., 759-766 (1991)
49. Bozler, et al. "Synthesis and Application of a Fluorescent Imido Ester for Specific Labelling of Amino Groups in Proteins," 749, Biochimica et Biophysica Acta, 238-243 (1983).
50. Mannsson et al., "Covalent Binding of an NAD Analogue to Liver Alcohol Dehydrogenase Resulting in an Enzyme-Coenzyme Complex not Requiring Exogenous Coenzyme for Activity," 86, European Journal of Biochemistry, 455-463 (1978)
51. Branden, et al., "Dehydrogenases," 36, Experientia Supplemental, 62-63
52. Mathewson and Finley, Biosensor Design and Application, American Chemical Society, Washington, D.C. (1992)
53. Dixon and Webb, The Enzymes, Academic Press, 684-702 (1979)
54. Plapp, 248 Journal of Biological Chemistry, 3470-3475 (1973)
55. W.L. Baker, "Co-existence of β -lactamase and penicillin acylase in bacteria; detection and quantitative determination of enzyme activities" 73, No. 1 J. Appl. Bacteriol, 14-22 (1992)
56. Richards and Bard, "Electrogenerated Chemiluminescence. 57. Emission from Sodium 9, 10-Diphenylanthracene-2-sulfonate, Thianthrenecarboxylic Acids, and Chlorpromazine in Aqueous Media, *Anal. Chem.* 67, 3140-3147 (September 15, 1995).

This Information Disclosure Statement is not a representation that the documents cited herein are considered most pertinent, or that a search has been undertaken, or that any of the cited documents is indeed prior art. Each of references 1-56 were either submitted to or cited by the Office in the parent applications U.S.S.N. 08/936,971; 08/484,766; 08/880,209; 08/880,210; and 08/880,353 which are being relied upon for an earlier effective filing date under 35 U.S.C. 120, and thus pursuant to 37 C.F.R. 1.98(d) copies need not be included with the present submission. The Examiner is invited to undertake an independent search.

This Information Disclosure Statement is being mailed before the mailing date of the first Office Action on the merits, and thus, pursuant to 37 CFR 1.97(b), Applicants respectfully request that the Examiner consider and make of record the documents cited herein. Applicants further request that a copy of the Form PTO-1449, appropriately initialed by the Examiner, be returned to Applicants' attorney.

No fee is believed due. If there are any additional fees, the Commissioner is authorized to charge any such fees or credit any overpayment in such fees to Deposit Account No. 50-0540.

Respectfully submitted,

Kramer Levin Naftalis & Frankel LLP
Attorneys for Applicants

By: 

George B. Snyder
Reg. No. 27,675
Albert B. Chen
Reg. No. 41,667
(212) 715-9100